

Statement of Work

1. Scope

This Statement of Work (SOW) sets forth the requirements to accomplish contractor support through all program phases of the Common Chassis AN/ZLQ-1 V2 derivative Shop Replaceable Assemblies (SRA) and sub-assemblies in support of the Maritime Patrol and Reconnaissance Aircraft (MPRA) PMA-290, Persistent Maritime Unmanned Aircraft Systems (PMUAS) PMA-262, Submarine Sensor Systems Program (PMS-435) and Naval Undersea Warfare Center (NUWC). The MPRA & PMUAS programs provide the warfighter with the latest state-of-the-art Special Missions Equipment (SME) which includes the Weapons System identified in this SOW. The weapon system has components and products in all phases of Acquisition, Technology and Logistics Life Cycle Phases.

Naval Undersea Warfare Center, is the Navy's full-spectrum research, development, test and evaluation, engineering, and fleet support center for submarine warfare systems and many other systems associated with the undersea battlespace. NUWC provides the technical foundation that enables the conceptualization, research, development, fielding, modernization, and maintenance of systems that ensure our Navy's undersea superiority. NUWC is responsible, cradle to grave, for all aspects of systems under its charter, and is engaged in efforts ranging from participation in fundamental research to the support of evolving operational capabilities in the U.S. Navy fleet. The major thrust of NUWC activities is in applied research and system development. PMS 435 specifically works with NUWC but has the responsibilities of designing, developing and oversees the construction of Electronic Warfare systems. The MPRA, PMUAS, PMS 435, and NUWC Systems covered by this SOW includes the individual SRAs, Support Equipment, Special Tools and Tooling, Packaging and Handling equipment, Test Equipment and applicable system software/firmware. System Equipment designation is identified in paragraph 1.1. Efforts will include but not limited to Repair/Rework/and Maintenance, Engineering Support Services, Research and Development, Test and Evaluation, Redesign and Modification, Training, Data collection, Logistics Support Services and Travel as required. This SOW provides the umbrella guidance for support of MPRA, PMUAS, PMS 435, and NUWC Systems and additional detailed guidance will be provided and implemented by specific Delivery Orders (DOs) placed under the Indefinite Delivery Indefinite Quantity (IDIQ) contract.

1.1 Equipment Designation

The configuration of the SRAs with components designated by Part Number for procurement, analysis, test, repair, and acceptance are as follows:

PART NUMBER	PART DESCRIPTION	RTAT
AZ-6VPX-SPC1	Motherboard	30
AZ-RX1-208	Rx Module	30
AZ-RX1-500	500Mhz Module	30
AZ-1612-1M-6G-6UVPX	16x12 Switch	30

And Configurations thereof.

2.0 Applicable Documents

The following documents form a part of this SOW to the extent specified herein. In the event of a conflict between any of the referenced documents and this SOW, the content of the SOW is the superseding requirement. Nothing in this document supersedes applicable Federal, State or Local laws and regulations unless a specific exemption has been obtained.

2.1 Military Standards

SAE-EIA-649 Configuration Management Standard

2.2 Other Documents

ISO 9000, Quality Management and Quality Assurance Standards

3.0 Requirements

As a basic requirement of the IDIQ, the contractor shall document all efforts and progress in all areas of products/support and report in accordance with Contract Data Requirements List (CDRL) delineated on each individual DO as required.

- The Contractor shall provide the requisite MPRA, PMUAS, PMS 435, and NUWC Systems expertise, labor, material, equipment, resources and facilities to design, develop, fabricate, prototype, produce, test, modify, repair, support and maintain MPRA, PMUAS, PMS 435, and NUWC Sensor System products and support components. Each individual DO shall provide the funding and specific tasking to execute the selected elements of this SOW. For certain WRAs that undergo redesign or modification/development, the phase may include the incorporation of new technologies and capabilities into the MPRA, PMUAS, PMS 435, and NUWC Systems product hardware and/or software. The contractor shall provide the engineering and logistics services, labor, material, equipment and facilities to perform assigned tasks and shall include efforts to increase producibility, maintainability, reliability, testability, increase safety and decrease cost. The major efforts under this IDIQ produces repair/rework of assets at the SRA levels and will comprise the bulk of the contractual efforts. Lesser efforts will involve various logistics and engineering tasking on an as-needed basis. The following sections outline the requirements for these efforts:

3.1 Repair of Repairable (ROR)/Rework Components

Repair of the SRAs and sub-assemblies will be a firm fixed price set forth in the IDIQ. Any parts not negotiated in the IDIQ will be handled on a delivery order basis. Pricing and/or estimated ceiling amounts per part number is identified in Section "B" of the IDIQ. CDRL A001, Contractor's Progress Status Management Report, CDRL A002, Government Furnished Equipment - Repair Status Report, CDRL A003, Test/Inspection Report – Test Data Sheets, and CDRL A004, Data Accession List (DAL) shall be submitted in accordance with the attached.

3.1.1 Repair and/or Modification:

- a. The contractor shall furnish effort including labor, material and facilities as may be required to repair and/or modify repairable assemblies as specified in the individual DO's. The repairable assemblies will be identified by manufacturer's part number and serial number.
- b. Unit(s) to be repaired under this SOW will be shipped at the Government's expense to the contractor's plant. The contractor shall receive for each shipment a listing, referencing the contract number, of the unit(s) included in the shipment stated on the DD Form 1149 or DD Form 1348.
- c. Upon receipt of such unit(s), the contractor shall notify the Contracting Officer's Representative (COR) that material has been received via e-mail.

If the needed repair exceeds 50% Level of Effort (LOE) of the SRA under test as specified in the delivery order; or the available funding, the contractor shall take action as described under the appropriate situation below:

- (1) Advise the COR if any portion of the required servicing is a result of the furnishing by the contractor of articles that were defective in material and workmanship or otherwise not in conformance with the requirements for the contract under which such articles were originally furnished.
- (2) In the event that the failed unit(s) is determined to have equipment Missing on Induction (MOI), the contractor shall notify the COR within thirty (30) days of its receipt along with a list of missing equipment. The Government will then provide disposition instructions (i.e. place usable assemblies/subassemblies into Government Furnished Product (GFP) and scrap remaining components or provide approval to replace missing equipment with existing GFP without replacement of GFP.) If the existence of MOI items causes the estimated repair cost to exceed LOE or the available funding, the contractor shall notify the Procuring Contracting Officer(PCO).
- (3) In the event the failed unit is determined to be Beyond Economical Repair (BER), for this system defined as the cost to repair being 80% or greater than the cost to replace, the contractor shall notify the COR within thirty (30) days of its receipt. Disposition of unit(s) shall be as directed by the PCO. A list of items that can be utilized for other repairs shall be provided to the PCO to add to the contract as GFP rotatable spare pool items and the contractor shall scrap the remaining material in accordance with their approved processes.
- (4) In the event the repair of a failed unit requires any redesign activity due to parts obsolescence, the contractor shall notify the COR within thirty (30) days of identification of the obsolescence issue with impacts, options and Rough Order of Magnitude(ROM) pricing. A course of action will be determined and directed by the PCO.

3.1.1.1 SPECIFICATION FOR REPAIR

- a. The assemblies to be repaired under this contract are those identified in Paragraph 1.1.
- b. The contractor shall repair the subject units to a Ready For Issue (RFI) serviceable operating condition and insure optimum reliability for the intended use in accordance with the applicable contractor specifications.
- c. Functions required to be accomplish in paragraph 3.1.1.1(b) shall consist of the following tasks:
 - (1) Clean, visually inspect and bench test the repairable.
 - (2) Disassemble to the extent necessary to verify failure and/ or inspect for needed repair processes and parts of subassemblies as required.
 - (3) Incorporate all applicable Engineering Change Order(ECO) into SRAs. Such ECOs shall be limited to those ECOs that are required for safety purposes or to maintain functional or performance reliability.
 - (4) Reassemble, perform calibration, functionally test, perform acceptance inspection and prepare for shipment.
- d. Efforts required to accomplish the above objectives shall be in accordance with the contractor's industrial shop methods (i.e. ISO-9000) and procedures with the special tools and test equipment developed.
- e. Service changes, bulletins or modifications except as specified herein shall be incorporated by the contractor under the contract with prior approval from the Contracting Officer.
- f. Advise the COR of any units received which have parts missing, or exhibit damage caused by circumstances other than fair wear and tear.
- g. Acceptance testing shall be performed by the contractor and shall include all tests necessary to assure that material service conforms to the performance required to provide Ready For Issue (RFI) material. The Defense Contract Management Agency (DCMA) shall retain the authority to conduct any test necessary to insure compliance with the applicable specifications. CDRL A003, Test Data Sheet is to accompany any unit under repair returned to NSWC Crane, IN.

3.2 DESIGN CHANGES

If a Government-approved design change occurs, which originates from any authorized approving agency other than NSWSC Crane Division, the contractor shall take the following action:

- (1) Incorporate such approved design changes in articles undergoing repair and/or modifications on order, if such change is considered necessary to ensure that the SRA will be compatible with, and provide adequate logistical support for, the operational system.
- (2) If the design change has been classified Major IAW SAE-EIA-649, notify NSWSC Crane Division COR, within five (5) working days from receipt of such change of:
 - (i) The change approval authority and change classification. (Ensure that only the document that provides Government approval of design change is identified.)
 - (ii) The approving agency.
 - (iii) The part number of the new configuration.
 - (iv) The extent of the contractor's ability to modify a previous configuration to a new configuration.
 - (v) Recommendation for implementation of the design change in any repairable assemblies held at the contractor's plant.
 - (vi) Preliminary estimated change in repair/spare prices, if any, to incorporate the modification. A formal cost proposal to the PCO shall follow within thirty (30) days. The proposal shall detail the cost impact to all spare and repair pricing affected by the change. CDRL A004, Data Accession List shall be submitted in accordance with the attached.
- (3) If the design change has been classified Minor IAW SAE-EIA-649, notify NSWSC Crane Division COR, within five (5) working days from receipt of such change of:
 - (i) The change approval authority and change classification. (Ensure that only the document that provides Government approval of design change is identified.) CDRL A004, Data Accession List shall be submitted in accordance with the attached.
 - (ii) The approving agency.
 - (iii) The part number of the new configuration or identification of new part, as applicable.
 - (iv) Effect of design change on the current spare repairable assembly inventory such as obsolescence and recommended buy quantity of a new part.

3.3 ENGINEERING SERVICES AND LOGISTICS SUPPORT

The contractor shall provide engineering services and logistics support including but not limited to research and development, testing, training, integration, checkout, troubleshooting, installation of modifications to the SRAs including incorporation of hardware, software and firmware changes, other technical and logistics services, and MPRA, PMUAS, PMS 435, and NUWC System installation and maintenance support. This support may be necessary at either the vendor location, at another contractor location, at a fleet operational or other government site, or any combination of these. In the event MPRA, PMUAS, PMS 435, and NUWC System on-site (not contractor home location) support is required, the contractor shall provide appropriately cleared and qualified Field Service Representative (FSR) personnel for maintenance of the MPRA, PMUAS, PMS 435, and NUWC Sensor System at Continental United States (CONUS). The site FSRs shall be fully qualified engineers or technicians capable of independently performing all required tasks and providing logistics support appropriate to the defined Operational Tempo (OPTEMPO) at each site. A DO shall be issued to define engineering and logistics requirements. Engineering, logistics, and technical support services may be required at but not limited to the Contractor's facility, NSWSC Crane, IN; NAWC Patuxent River, MD; NAS Jacksonville, FL. A DO shall be issued by the PCO on a task-by-task basis to define individual engineering, logistics and technical services requirements when needed. CDRL A001, Contractor's Progress Status Management Report, CDRL A004, Data Accession List, and CDRL 0005, Technical Report – Logistics/Engineering Service Report shall be submitted in accordance with the attached.

3.3.1 PARTS OBSOLESCENCE MANAGEMENT

Parts obsolescence shall be managed such that any part known by the Contractor to be in danger of becoming obsolete (based on vendor 'last time buy' or 'end of life' announcements) shall be identified to the COR with its related impacts and options (including recommended quantity to purchase as part of a last time buy). The COR will then make a determination as to whether or not to pursue a last time buy to place parts in inventory for potential future use, initiate a redesign effort, or accept the risk associated with that part potentially becoming unavailable. CDRL A005 Technical Report Logistics/Engineering Services shall be submitted in accordance with the attached.

3.4 SYSTEM TRAINING SUPPORT

The contractor shall develop and present the technical training for MPRA, PMUAS, PMS 435, and NUWC System operators, maintainers and technicians. Operators, maintainers and technicians attending the training may include but will not be limited to NSWC Crane and their support contractors, aircraft integrator, government program management and military personnel. Training may be conducted at the contractor facility, at a government facility or on aircraft at the aircraft location. A DO shall be issued for training support on a task-by-task basis when needed.

Training shall consist of MPRA, PMUAS, PMS 435, and NUWC System specific instructional materials, course outlines, lesson guides, trainee guides, visual aids, and test packages, developed in a digital format where applicable, to "best commercial practice" to support operator and O-Level maintenance training. Training shall be based on inherent system (hardware and software) design. The training shall address all authorized and applicable configurations of the MPRA, PMUAS, PMS 435, and NUWC Systems. Operator training shall include, at a minimum and if applicable, system-level theory of operations, pre-flight, flight, post-flight, normal and emergency operational procedures, and all safety procedures related to the operation of the system. At a minimum O-level maintenance training shall include equipment descriptions; controls and indicators for all equipment; theory of operation to the major subassembly block diagram level, interface, and system repair; BIT/BITE operation; fault detection and location procedures; and SRA removal and replacement instructions. CDRL, A006, Training Materials shall be submitted in accordance with the attached.

3.5 PROGRAM STATUS REVIEW

The contractor may host specific Meetings and Reviews as deemed necessary by NSWC Crane. The program status reviews shall be held twice a year, specific dates for the reviews and the locations shall be agreed to by the contractor and Government. The contractor may record the minutes and action items at each meeting/review and provide to the Government if required by the applicable Job Order. The contractor shall provide CDRL A007, Conference Agenda and CDRL A008, Conference Minutes in accordance with the attached. The content of the review will vary, but could include the following:

- Repair Schedule and Status
- Manufacturing status
- Risk Management
- Configuration Issues
- Reliability Issues
- Technical Issues

4.0 TRAVEL

It is anticipated that travel will be required by the contractor in support of paragraphs 3.4, 3.5 and 3.6 herein. The following is an outline of the estimated travel requirements per year:

<u>Destination</u>	<u>Number of Trips</u>	<u>Number of Days</u>	<u>Number of Travelers</u>
NSWC Crane, IN	1	4	2
NAWC Patuxent River, MD	1	4	2
NAS Jacksonville, FL	1	4	2

A Contractor's Progress Status Management Report, CDRL A001 shall be submitted in accordance with the attached.

5.0 DATA

Other specific Data requirements will be referenced in each Delivery Order unless specified on the CDRL, all submittals shall be electronic file submittals shall be compatible with Microsoft Office or the originating software program format. Files shall be complete working files (i.e., Excel cells contain active formulas) and shall not be locked or otherwise password protected. Documents submitted as changes shall clearly have the changes highlighted (i.e., track changes active in MS Word). Delivery dates falling on weekends or national holidays may be delivered on the next regular working day.